## Louisiana Arbovirus Surveillance Summary 2012 CDC Week 31 From: 01/01/2012-08/04/2012

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Table of Contents	
Topic:	Page Number:
Report Summary	1
WNV Human Clinical Picture: Aggregate Report by Disease Type, Age Group and Gender	2
WNV-NID, Fever and Asymptomatic Infections in Louisiana by Parish According to CDC Week (with EpiCurve)	3
WNV-NID by Parish from 2002-Present (parishes highlighted in grey have cases each year)	4
WNV-NID Cases by CDC Week for Each Year from 2002-Present	5
Proportion of Human Clinical Presentations by Year from 2002-Present	5
Arboviral Horse Infections in Louisiana by Parish According to CDC Week (with EpiCurve)	6
CDC Weeks (Week Starting-Week Ending)	7

## **Report Summary**

The goal of the surveillance for West Nile Infections in Humans is to describe the disease burden of the West Nile infection on the human population. Only West Nile Neuro-invasive diseases (encephalitis or meningitis) get reliably reported. For every NID case there are about 10 cases of Fever and about 90 completely asymptomatic infections. Only 1% of the WN-Fever and asymtomatic cases are reported. Although we show the number of cases of all WN infections, it is important to remember that only WN-NID cases are useful for monitoring disease burden and trends in WN in humans.

**Humans:** As of this report, 53 human WNV infections have been identified. There are 14 asymptomatic cases, 12 identified through screening of blood donors. Of the 39 WNV cases with symptoms, 29 are classified as WNV neuroinvasive disease (NID) cases, the most severe presentation of the disease, and 10 are classified as WNV fever cases, the WNV-related mild, febrile illness. There have been 0 cases of California group Encephalitis (LaCrosse Encephalitis), 0 cases of Eastern Equine Encephalitis and 0 cases of St. Louis Encephalitis reported. Sporadic cases of these arboviruses often occur from year to year in the state.

Horses: There have been 16 confirmed cases of equine WNV and 13 confirmed cases of EEE in Louisiana this year.

**Sentinel Chickens:** Have been used in the past as a statewide early warning system to detect arbovirus transmission. These chickens in secure cages were strategically placed and bled regularly. Serologic tests performed on the sentinel chickens provided information of current and local transmission of many arboviruses. However, experience shows that this was not very effective in providing information about local transmission.

**Dead Birds:** Are no longer collected statewide because testing of dead birds does not provide information on where and when the bird was infected or of local transmission. Dead birds can only indicate that the bird died at a particular location of an arbovirus endemic to Louisiana. Persons who encounter dead birds in Louisiana can contact their local parish health unit or mosquito control program.

**Mosquito Pools:** This is the most effective surveillance system to monitor arboviral transmission. Arboviruses are detected through nucleic acid testing of pools of 50 or more mosquitoes of the same species. A positive mosquito pool is an indicator of recent transmission, between mosquitoes and birds, horses or humans. There have been over 15,195 mosquito pools from over 27 parishes submitted for testing. 1 EEE positive pool, 0 SLE positive pools and 1516 WNV positive pools have been found in 26 parishes.

West Nile Virus (WNV) Clinical I	Presentation	on								
Neuroinvasive Disease		NID	29							
Fever		F	10							
Asymptomatic Present Infections		PRE	14							
Positive Blood Donors		PVD	12							
Deaths 2										
Eastern Equine Encephalitis (	EEE) Case									
CDC Week Onset	Parish	Age	Gender							
LaCrosse (CAL) Case	s									
CDC Week Onset	Parish	Age	Gender							
St. Louis Encephalits and Fever	(SLE) Cas	es								
CDC Week Onset	Parish	Age	Gender							
ODO Week Oliset	i aiisii	Age	Gender							

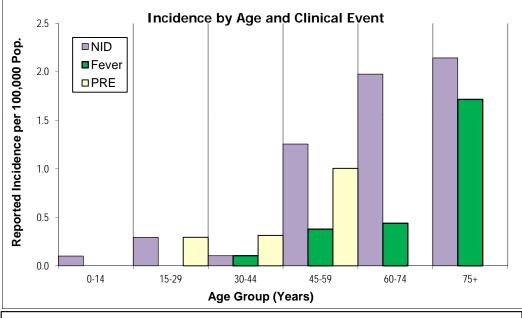
## **Explanation of Clinical Disease:**

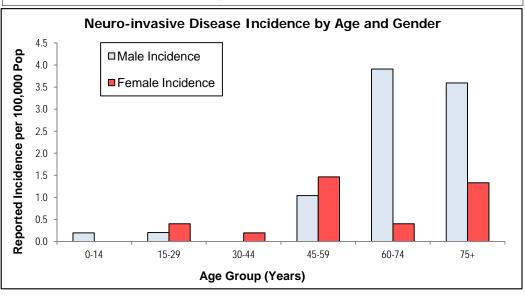
WN infections have occurred each year in Lousiana for the last 10 years. Persons of all ages are considered equally susceptible to infection. The majority of all persons infected and immuno-competent are completely asymptomatic (80-90%). A smaller proportion of persons (10-20%) present with influenza-like illness with abrupt onset of fever. A minority of people develop a serious neurologic illness such as aseptic meningitis or encephalitis (0.2 younger than 65 years old, 2% older than age 65). About 10% of people who develop neuroinvasive disease can die. The reporting of deaths caused by WN NID is not mandated by the Louisiana Sanitary code. It has been inconsistent in the past. It is limited to those occuring within 2 weeks for onset.

Limitations: Human data have very limited usefulness for mosquito control purposes. Only 2% of all WN infections are reported (because most WN infections are asymptomatic or WN fever cases do not get medical care, they never get diagnosed nor are reported). The reporting of those cases is delayed. From the time a mosquito bites a bird infected with WN viruses, it takes 1 to 2 weeks depending on temperatures and other environmental conditions for the virus to multiply in the mosquito vector (extrinsic incubation period); then it takes 3 to 14 days for the virus to multiply in the human host (intrinsic incubation period); it then takes several days from onset of disease to seeking medical care; then a few more days for a physician to order a confirmatory lab test and get the result back (one week from onset, if all goes well); then any where from a few days to a week or two to get the report to DHH OPH. All in all, from the initial mosquito infection to the reporting of the infection it may take from 3 to 6 weeks. In summary, human data are too little too late to be of major use for mosquito control. To provide mosquito control program with data on location of human cases that may be of limited use for correlating infection rates in mosquitoes and human cases and of use to address public and media concern, general geographical location of cases and weeks of onset are provided to mosquito control who request the information. This information must remain strictly confidential. The DHH OPH Laboratory is a reference laboratory used for epidemiologic purposes. Its role in diagnosis of cases is limited since the great majority of physicians and hospitals use private laboratories for their diagnosis.

Ago Group			Clinical Class	ification		
Age Group	<b>NID Cases</b>	Incidence	Fever Cases	Incidence	PRE Cases	Deaths
0-14	1	0.1	0	0.0	0	
15-29	3	0.3	0	0.0	3	
30-44	1	0.1	1	0.1	3	
45-59	10	1.3	3	0.4	8	
60-74	9	2.0	2	0.4	0	1
75+	5	2.1	4	1.7	0	1
Undetermined						
Total	29	0.6	10	0.2	14	2

Ago Group	Neur	oinvasive Dise	ase Cases by	Gender
Age Group	Male	M Incidence	Female	F Incidence
0-14	1	0.2	0	0.0
15-29	1	0.2	2	0.4
30-44	0	0.0	1	0.2
45-59	4	1.0	6	1.5
60-74	8	3.9	1	0.4
75+	3	3.6	2	1.3
Undetermined				
Total	17	8.0	12	0.5





## **WNV-NID Infections by Parish According to CDC Week**

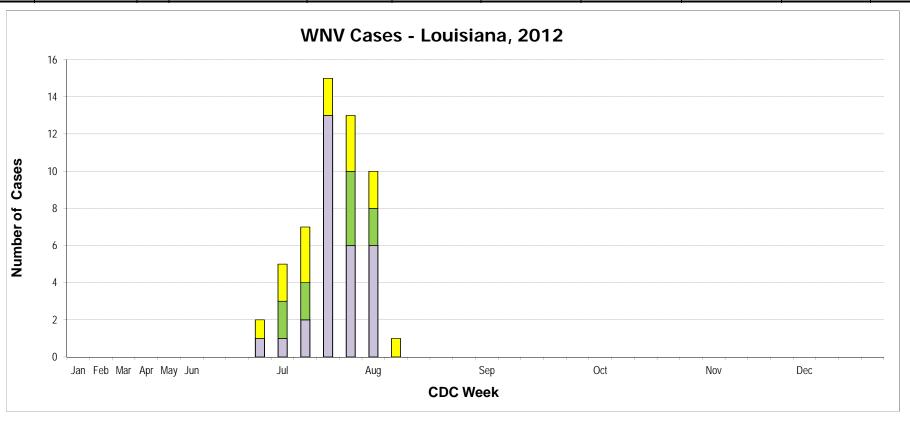
Page 3	3
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	CE	C Week	1-5	6-9	10-13	14-17	18-21	22	23	24 25		27	28	29	30	31	32 33	34	35	36	37 38	3 39		41	42	43 4			46	47 4	8 49	50	51	52
Region	Parish	Total	Jan	Feb	Mar	Apr	May	Jun			Jul				Aug				Sep				Oct				N	Vol			Dec			
1	Jefferson	1											1																					
1	Orleans	2	<u>:</u>									1		1																				
2	East Baton Rouge	5	i									1	3		1																			
3	Lafourche	1											1																					
5	Calcasieu	1												1																				
6	Concordia	1											1																					
6	Rapides	4	ļ ļ							1			1	1	1																			
	Vernon	1									1																							
	Caddo	1											1																					
	Natchitoches	1											1																					
	Ouachita	1													1																			
	Livingston	1											1																					
	St. Tammany	6	1										3	2	1																			
9	Tangipahoa	3	3											1	2																			
	WNV-NID Total	29	0	0	0	0	0	0	0	0 1	1	2	13	6	6	0	0 0	0	0	0	0 (	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0
			_																															
	Jefferson	2										1		1																				
	East Baton Rouge	2	2								1			1																				
	East Feliciana	1									1																							
	Rapides	1										1		_																				
	St. Tammany	2	:											1	1																			
9	Tangipahoa	10		_	_	•	•		_	•		_	_	1	1	_			_	•	0 (			_	_	•		^	•	0 0		_	•	•
	WNV-F Total	10	0	0	0	0	0	0	0	0 0	2	2	0	4	2	U	0 0	0	0	U	0 (	0 0	0	0	U	0	U	0	0	0 0	0	U	0	0
	T	1	1					1						-					1															
	Jefferson	1										1																						
	St Bernard	1								1																								
	East Baton Rouge	1														1																		
	Pointe Coupee	1													1																			
	West Baton Rouge	1											1																					
	Terrebonne	1												1																				
	Concordia	1												1																				
	Rapides	1												1																				
	Bossier	1											1																					
8	Lincoln	1													1																			
	St. Tammany	1										1																						
9	Tangipahoa	3	3								2	1																						
	WNV-PRE Total	14	0	0	0	0	0	0	0	0 1	2	3	2	3	2	1	0 0	0	0	0	0 (	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0

**WNV-NID Infections by Parish According to CDC Week** 

Page 4

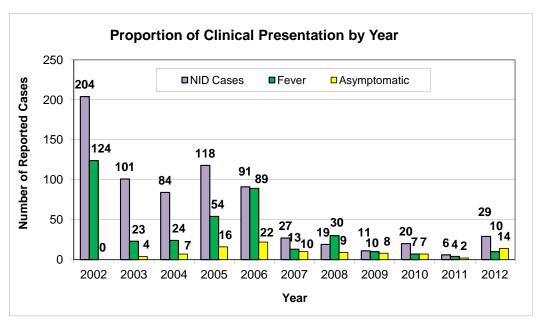
CE	DC Week	1-5	6-9	10-13	14-17	18-21	22 23	24 25	26	27	28	29	30	31	32 33	34	35	36	37 3	8 39	40	41	42	43 44	45	46	47	48	49	50	51	52
Region Parish	Total	Jan	Feb	Mar	Apr	May	Jun		Jul				Aug				Sep				Oct				Nov			- li	Dec			



R	Parish	Reported	Infec	tions 20	012		Pre	viou	ısly	Repo	ortec	IN E	D Ca	ses	
e		Incidence	NID	Fever	PRE	02	03	04	05	06	07	08	09	10	11
<u>g</u>	Jefferson	0.2	1	2	1	24	3	1	6	8	2	2	0	0	O
1	Orleans	0.2	2		•	10	2	1	6	12	2	2	0	0	0
1	Plaguemines	0.0				0	0	0	0	0	0	0	0	0	0
1	St Bernard	0.0			1	0	0	0	1	0	0	0	0	0	0
2	Ascension	0.0			-	6	2	1	3	10	0	0	0	2	0
2	East Baton Rouge	1.2	5	2	1	37	1	22	17	6	0	0	2	9	0
2	East Feliciana	0.0	•	1	•	2	1	1	0	0	0	0	0	0	0
2	Iberville	0.0		•		2	0	0	2	0	0	0	0	0	0
2	Pointe Coupee	0.0			1	6	0	0	2	0	0	0	0	0	0
2	West Baton Rouge	0.0			1	2	0	1	0	1	0	0	0	0	0
2	West Feliciana	0.0			-	0	0	0	0	0	0	1	0	0	0
3	Assumption	0.0				0	1	0	0	1	0	0	0	0	0
3	Lafourche	1.1	1			0	2	0	1	1	0	0	0	0	0
3	St Charles	0.0				0	0	0	0	0	0	0	0	0	0
3	St James	0.0				2	0	0	0	0	0	0	0	0	0
3	St John	0.0				2	0	0	0	0	1	0	0	0	0
3	St Mary	0.0				0	1	0	0	0	0	0	0	0	0
3	Terrebonne	0.0			1	0	3	0	0	0	0	0	0	0	0
4	Acadia	0.0				0	0	0	1	0	0	0	0	0	0
4	Evangeline	0.0				1	0	1	0	0	1	0	0	0	0
4	Iberia	0.0				2	1	0	4	0	0	0	0	3	0
4	Lafayette	0.0				4	0	1	1	1	1	0	0	0	0
4	St Landry	0.0				1	0	3	0	0	0	0	0	0	0
4	St Martin	0.0				0	0	0	0	0	0	0	0	0	0
4	Vermillion	0.0				0	0	0	0	1	0	0	0	2	0
5	Allen	0.0				0	0	0	0	0	0	0	1	0	0
5	Beauregard	0.0				0	0	1	1	0	1	0	0	1	0
5	Calcasieu	0.5	1			8	1	3	2	5	0	1	0	0	2
5	Cameron	0.0				0	1	0	0	0	0	0	0	0	0
5	Jefferson Davis	0.0				0	0	1	0	0	0	0	0	0	0

R	Parish	Reported	Infec	tions 20	012		Prev	vious	ly Re	port	ted I	NID (	Case	:S	
e g		Incidence	NID	Fever	PRE	02	03	04	05	06	07	80	09	10	11
6	Avoyelles	0.0				2	0	0	0	1	1	1	0	0	0
6	Catahoula	0.0				0	1	0	0	1	0	0	0	0	0
6	Concordia	4.9	1		1	1	0	0	0	1	1	0	0	0	0
6	Grant	0.0				1	0	0	0	0	0	0	0	0	0
6	Rapides	3.2	4	1	1	14	2	8	7	7	2	0	1	0	0
6	Lasalle	0.0				0	0	0	0	0	0	0	0	0	0
6	Vernon	1.9	1			0	0	0	0	1	0	0	0	0	1
6	Winn	0.0				1	0	0	1	0	0	0	0	0	0
7	Bienville	0.0				0	0	0	0	0	0	0	0	0	0
7	Bossier	0.0			1	3	8	9	6	2	0	0	0	0	0
7	Caddo	0.4	1			5	38	8	16	3	7	3	1	0	0
7	Claiborne	0.0				0	1	0	0	0	0	0	0	0	0
7	DeSoto	0.0				0	1	0	0	0	0	0	0	0	0
7	Natchitoches	2.6	1			1	1	0	2	0	0	0	0	0	0
7	Red River	0.0				0	0	0	0	0	0	0	0	1	0
7	Sabine	0.0				1	0	0	0	0	1	0	0	0	0
7	Webster	0.0				0	0	1	0	1	0	0	0	0	0
8	Caldwell	0.0				0	0	1	0	0	0	0	0	0	0
8	East Carroll	0.0				0	0	0	0	0	0	0	0	0	0
8	Franklin	0.0				0	0	1	1	0	0	0	0	0	0
8	Jackson	0.0				0	1	0	0	0	0	0	0	0	0
8	Lincoln	0.0			1	0	2	0	1	0	0	1	0	0	0
8	Madison	0.0				0	0	1	0	0	0	0	0	0	0
8	Morehouse	0.0				0	2	2	1	0	1	0	0	0	0
8	Ouachita	0.7	1			6	2	5	15	3	1	1	0	0	0
8	Richland	0.0				2	1	1	0	0	0	0	0	0	0
8	Tensas	0.0				0	0	0	0	0	0	0	0	0	0
8	Union	0.0				1	1	1	0	0	0	0	0	0	0
8	West Carroll	0.0				0	2	2	0	0	1	0	0	0	0
9	Livingston	1.1	1			12	5	6	11	1	1	1	0	1	0
9	St Helena	0.0				0	2	0	2	0	0	0	0	0	0
9	St Tammany	3.1	6	2	1	27	4	0	3	14	0	3	4	1	1
9	Tangipahoa	3.0	3	2	3	12	6	1	2	6	1	3	1	0	1
9	Washington	0.0				6	2	0	3	4	2	0	1	0	1
L	Total	1.0	29	10	14	204	101	84	118	91	27	19	11	20	6

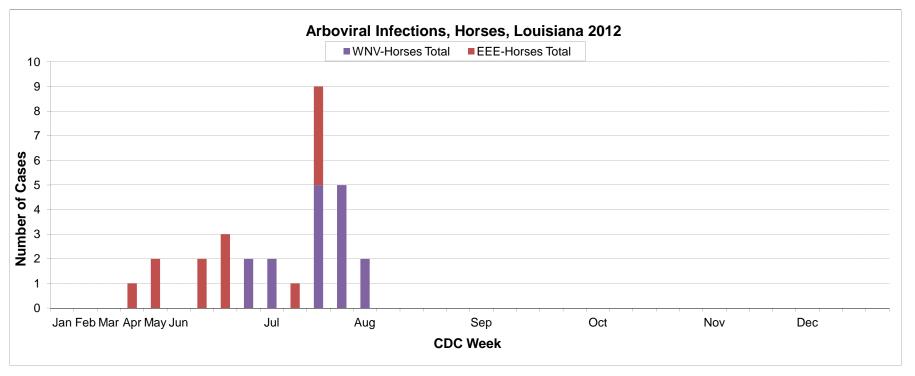
						CDC We						
	Week	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Jan	11											
L	3											
	7											
March	10											
L	13											
	17											
May	19											
L	20	0	0	0	0	0	0	0	0	0	0	0
	21	0	0	0	0	0	0	0	0	0	0	0
June	22	0	0	0	0	0	0	0	0	0	0	0
L	23	0	0	0	0	0	0	0	0	0	0	0
Ļ	24	2	0	0	0	0	0	0	0	0	0	0
	25	2	2	0	0	0	0	0	1	0	0	1
July	26	11	0	0	0	1	0	0	1	0	0	1
	27	6	3	3	4	1	0	0	2	3	0	2
	28	9	5	2	5	4	0	0	0	0	1	13
	29	23	5	2	13	5	0	0	1	1	1	6
August	30	23	8	8	8	6	0	2	1	2	0	6
	31	21	10	5	21	7	1	1	0	0	0	0
	32	24	7	15	11	14	3	2	1	1	1	0
	33	21	8	7	9	13	2	1	2	1	0	0
	34	14	6	3	8	7	2	3	1	2	0	0
September	35	8	6	5	6	6	5	3	0	3	1	0
	36	13	4	5	8	9	3	2	0	1	1	0
	37	8	9	3	9	6	3	0	1	2	1	0
	38	6	4	4	2	3	1	0	0	1	0	0
	39	3	2	5	4	4	1	0	0	0	0	0
October	40	3	4	5	4	1	3	3	0	1	0	0
	41	3	2	4	3	1	0	0	0	0	0	0
	42	3	1	2	3	1	0	0	0	0	0	0
	43	0	2	0	0	0	3	0	0	0	0	0
	44	0	4	0	0	1	0	0	0	0	0	0
November	45	0	2	2	0	0	0	1	0	0	0	0
	46	0	1	1	0	0	0	0	0	0	0	0
	47	1	1	2	0	1	0	1	0	0	0	0
	48	0	2	1	0	0	0	0	0	2	0	0
December	49	0	3	0	0	0	0	0	0	0	0	0
	50	0	0	0	0	0	0	0	0	0	0	0
	51	0	0	0	0	0	0	0	0	0	0	0
Ī	52	0	0	0	0	0	0	0	0	0	0	0
VID Total		204	101	84	118	91	27	19	11	20	6	29



	Tota	al Huma	an WN\	/ Clinica	al Prese	entatio	n by Ye	ar				
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
NID Cases	204	101	84	118	91	27	19	11	20	6	29	710
Fever	124	23	24	54	89	13	30	10	7	4	10	388
Asymptomatic	NA	4	7	16	22	10	9	8	7	2	14	99
Proportion of NID/F	0.62	0.81	0.78	0.69	0.51	0.68	0.39	0.52	0.74	0.60	0.74	
Deaths	24	7	7	11	9	2	1	0	0	0	2	

Arbovira	l Horses
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																																					_
	CDC	Week	1-5 6-	9 10-13	14-17	18-21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38 3	9 4	0	41 4	12	43	44	45	46	47	48	49	50	51	52
Region	Parish	Total	Jan Fe	b Mar	Apr	May	Jun				Jul				Aug					Sep				C	ct					Nov				Dec			
2	Ascension	3								1			1	1																							
2	East Baton Rouge	2											2																								
2	East Feliciana	1												1																							
4	Iberia	1													1																						
4	St. Landry	1								1																											
5	Beauregard	1												1																							
7	Natchitoches	1												1																							
8	Franklin	1													1																						
8	Ouachita	1												1																							
9	Livingston	1									1																										
9	St. Helena	1											1																								
9	St. Tammany	1											1																								
9	Tangipahoa	1									1																										
	Undetermined	0																																			
	WNV-Horses Total	16	0 0	0	0	0	0	0	0	2	2	0	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1		1			1									ı																						—
3	Assumption	1							1																												
3	Lafourche	1						_	1																												
3	Terrebonne	4				2		1	1																												
4	Iberia	1						1					_																								
6	Rapides	3											3																								
8	Ouachita	1											1																								
9	Livingston	1										1																									
9	Washington	1			1																																
	Undetermined EEE-Horses Total	12	0 0	0	1	2	0	2	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LLL-HOISES TOTAL	13	U	U			U		3	U	U		4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	



CDC Week	Week Starting	Week Ending
01	1/1/2012	1/7/2012
02	1/8/2012	
03	1/15/2012	1/21/2012
04	1/22/2012	1/28/2012
05	1/29/2012	2/4/2012
	2/5/2012	
06 07		2/11/2012
	2/12/2012	2/18/2012
08	2/19/2012	2/25/2012
09	2/26/2012	3/3/2012
10	3/4/2012	3/10/2012
11	3/11/2012	3/17/2012
12	3/18/2012	3/24/2012
13	3/25/2012	3/31/2012
14	4/1/2012	4/7/2012
15	4/8/2012	
16	4/15/2012	4/21/2012
17	4/22/2012	4/28/2012
18	4/29/2012	5/5/2012
19	5/6/2012	5/12/2012
20	5/13/2012	5/19/2012
21	5/20/2012	5/26/2012
22	5/27/2012	6/2/2012
23	6/3/2012	6/9/2012
24	6/10/2012	6/16/2012
25	6/17/2012	6/23/2012
26	6/24/2012	6/30/2012
27	7/1/2012	7/7/2012
28	7/8/2012	7/14/2012
29	7/15/2012	7/21/2012
30	7/22/2012	7/28/2012
31	7/29/2012	8/4/2012
32	8/5/2012	8/11/2012
33	8/12/2012	8/18/2012
34	8/19/2012	8/25/2012
35	8/26/2012	9/1/2012
36	9/2/2012	9/8/2012
37	9/9/2012	9/15/2012
38	9/16/2012	9/22/2012
39	9/23/2012	9/29/2012
40	9/30/2012	10/6/2012
41	10/7/2012	10/13/2012
42	10/14/2012	10/20/2012
43	10/21/2012	10/27/2012
44	10/28/2012	11/3/2012
45	11/4/2012	11/10/2012
46	11/11/2012	11/17/2012
47	11/18/2012	11/24/2012
48	11/25/2012	12/1/2012
49	12/2/2012	12/8/2012
50	12/9/2012	12/15/2012
51	12/16/2012	12/22/2012
52	12/23/2012	12/29/2012
	12,20,2012	12,27,2012